The Australian Accountant

Published monthly for the Commonwealth Institute of Accountants and The Australasian Institute of Cost Accountants

Vol. XIV, No. 10 OCTOBER 15 ,1944 Subscription: Per annum, 12/6 Single copies, 1/6

Taxation Section

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THE EFFECT ON GOODWILL VALUES OF HIGH INCOME TAXATION

Goodwill is the capital value of the future profits of a business. It is considered that, in calculating those profits, the Crown's share, receivable by way of income tax, should be excluded. If these assumptions be correct, it follows that the greater the Crown's share of the profits the less there remains for the purchaser of the goodwill, and the capital value of the goodwill must accordingly be reduced.

If income tax were levied on a "proportional" basis (i.e., the same rate of tax were applied to all income), the Crown's share of the profits would be the same, whoever the purchaser might be. In fact, the principle of graduation is applied, with the exception of the primary tax on companies. This means that each prospective purchaser must make an independent calculation in order to ascertain how much of the future profits will go to the Crown, how much will remain in his hands, and how much is the capital value of the goodwill based on such remaining profits.

Even at this stage no great difficulty would be experienced in arriving at the value of the goodwill if purchasers had no other income. This is not normally the case. Consequently, a prospective purchaser with a high independent income would receive relatively very little as his share of the profits of the business. Generally speaking, it is this class of person who alone has the money to buy a business. The exception is the man who receives a legacy or a gift, or wins a prize in a lottery.

The following is an illustration of the extreme case and reveals the necessity of deducting not only Commonwealth ordinary income tax on the company's profits, but of making some provision for the additional tax on distribution of those profits, whether notional or actual:

(1) Average adjusted annual profit after allowing for ordinary income tax	£10,000
Paid-up capital: 50,000 shares of £1 each	£50,000
Profit capitalised at 10%.	
Value per share $= £\frac{100,000}{50,000}$	
$=$	£2 0 0
Net assets of company	£50,000
Goodwill, on basis of valuation on earning capacity	50,000
	£100,000

The company is owned by one shareholder whose taxable income, other than the dividends from the company, exceeds £5,000. If he sold shares at the above price of £2 to an investor whose taxable income, exclusive of the income to be derived from the new investment, also exceeded £5,000, the yield, assuming a 15% dividend, to the purchaser would be as follows:

15% on £100	=	£15 0 0	
Less Income Tax			
£15 at 18/6	=	13 17 6	
Net return of		£1 2 6	on £200
	or	£0 11 3	on £100
= a yield of		·562%	

(2) If the company distributed the whole of the net profit after providing for ordinary income tax, he would receive a dividend of 20% and the yield would be as follows:

20% on £100	=	£20 0 0	
Less Income Tax			
£20 at 18/6	=	18 10 0	
Net return of		£1 10 0	on £200
	or	£0 15 0	on £100
= a yield of		·75%	

(3) If the investor bought current 3¼% Commonwealth Bonds at par, the yield would be as follows:

3¼% Interest on £100	=		£3 5 0	
Less Income Tax				
£3 at 18/6	=	£2 15 6		
Rebate £3 at 2/-	=	6 0		
			2 9 6	
Net return of			£0 15 6	
= a yield of			·775%	

(4) If the shares were bought by a person whose rate of income tax was 10/- in £, the yield to him would be as follows:

15% on £100	=	£15 0 0	
Less Income Tax			
£15 at 10/-	=	7 10 0	
Net return of		£7 10 0	on £200
= a yield of		3·75%	

The writer has seen, in recent years, such extraordinary prices paid for shares in private companies, and has also seen such extraordinary values placed on private company shares by the Crown for purposes of death duty.

that it is feared that income tax has not been taken into account in fixing the price or in making the valuation. These prices and values are so divorced from reality that it would appear that some buyers and valuers are suffering from mental indigestion, and these notes are offered to them by way of a carminative.

It will be seen from the above illustration that, even on a 20% dividend basis, the net yield to the investor, ·75%, is not as high as the yield from Commonwealth Bonds, ·775%. Moreover, on the one hand, half of the purchase price is represented by "blue sky," whereas, in the case of Commonwealth Bonds, the investor has a negotiable security for the full amount. In these particular circumstances, a purchaser who is willing to pay anything for goodwill is in need of a double dose of Gunn's Mental Carminative.

It is realised that, in valuing shares for purposes of death duty, some value must be fixed independently of actual purchasers. However, any man in his senses would agree that the *maximum* value of the goodwill is that which is based on the proposed purchaser's share of the profits, i.e., after deducting the Crown's share on the assumption that the purchaser had no other income.

If shares in private companies were valued on this basis, the Crown would be certain of receiving death duty based on the highest value obtainable for goodwill if the shares were sold to an intelligent purchaser who brought all factors, including income tax, to account in fixing the price of the shares.

Goodwill Payable by Incoming Partner

The writer has met quite a number of pathetic examples where the purchaser of a professional business has been financially crippled through contracting to pay an exorbitant sum for the goodwill of the business. The following is an example:

Assume that a professional man takes a clerk earning £8 per week into partnership on the basis of a one-third share interest in the goodwill, assets and profits; the goodwill having to be paid for by five equal annual instalments.

Adjusted annual profit		£3,000
Clerk's salary of £8 per week not payable when partnership formed		416
		£3,416
One-third		£1,138
Deduct—		
Salary as clerk in respect of which no goodwill payable	£416	
Interest on purchase price, say	40	
		456
		£682
Three years' purchase		£2,046

The financial success by the junior partner is as follows:

Net profit of new partnership	£3,416

One-third share of junior partner	£1,138
Less Income Tax—	
£1,138 at 88·8475d. in £	421
	£717
Less instalment of goodwill—	
One-fifth of £2,046	409
Residue	£308
In five years the junior partner will have made	£1,540

If he had remained a clerk on £8 per week, his position would have been as follows:

Salary	£416
Less Income Tax—	
£416 at 58·8235d.	102
Residue	£314
In five years	£1,570
In favour of remaining a clerk at £8 per week	£30

Against this result there is, of course, the fact that, at the end of the fifth year, the partner has a one-third interest in the goodwill of the business, whereas the clerk would have nothing. But where, as in the case of most professional businesses, the goodwill is personal, it is reasonable to assume that, after five years, the composition of the goodwill would have changed to a considerable extent, and that a portion of the goodwill would have been created by the new partner himself during the course of the five years.

In the case of personal goodwill, and particularly that of a professional practice, I doubt if, in any instance, the goodwill is worth more than one year's adjusted profits. In any event, the proper approach to the problem is not how much it is worth, but how much dare the selling partner take from the purchasing partner, remembering that the latter has to incur the expenditure of living.

Value of a Patent

It will be observed that, in the foregoing examples, the purchaser gets no deduction for income tax purposes in respect of the amount paid for goodwill, and the vendor receives the amount tax free. If the purchaser received a deduction for the goodwill and the vendor were assessable, then income tax need not be brought to account. This is the position where a premium is paid on the grant, surrender, or assignment of a lease, or for "any goodwill or licence attached to or connected with land, a lease of which is granted, assigned, or surrendered" (s. 83). Where, however, the asset is of a wasting nature (such as a patent), the vendor is normally not assessable, and the purchaser receives no deduction. In this class of case, income tax should certainly be brought to account in ascertaining the value of the asset. For example:

A manufacturer (sole trader) acquires a patent for £10,000, the cost of which is not an allowable deduction for purposes of income tax; the life of the patent is 16 years. Assume that his taxable income is £4,000 per annum. The exploitation of the patent increases his taxable income to £5,000. The net result of the transaction will be as follows—

Taxable Income (all Personal Exertion)	£5,000
Less Income Tax—	
£5,000 at 169·46d.	3,530
	£1,470
Less amortisation of patent $\frac{£10,000}{16}$ =	625
Net residue per annum	£845
Net residue in 16 years =	£13,520

If the manufacturer had agreed to pay a royalty of, say, £900 per annum for the life of the patent, the position would be as follows:

Taxable Income, as before	£5,000
Less payment of royalty	900
Taxable Income	£4,100
Less Income Tax—	
£4,100 at 158·7171d.	2,711
Net residue per annum	£1,389
Net residue in 16 years =	£22,224
In favour of paying royalties amounting to £14,400 instead of buying patent for £10,000 =	£8,704

Income Tax Rates

Under the Income Tax Act, 1944, the rates of tax applicable to incomes derived during the year ended June 30, 1944, are the same as those for the income year ended June 30, 1943. The income year ended June 30, 1944, is the year of transition to "pay-as-you-earn" taxation and the income tax payable will be the amount remaining after allowing the rebates provided by new s. 160AH, i.e., generally speaking, 75%.

The same rates will also be applied in calculating the provisional tax payable for the income year ending June 30, 1945.

Deferred Maintenance of Buildings, Plant and Machinery

Provisions similar to those enacted in New Zealand earlier in the year are contained in the second amending Act of 1944 brought down in September. Under proposed new sections 53 A-C, taxpayers may obtain deductions for the estimated cost of normal maintenance work which they have been unable to carry out on buildings, plant, machinery, and other property used in the production of assessable income, because of lack of manpower and materials arising out of the war.

Deductions are to be allowed in respect of deferred maintenance, the need for which first arose during the income year ended June 30, 1942 (*or substituted accounting period*), *or any subsequent year*, but prior to the termination of the present war.

The term "deferred maintenance" is defined to mean "the maintenance of property, whether real or personal, in a normal state of repair or upkeep where—

(a) the need for the maintenance first arose in the year of income and prior to the termination of the present war;
(b) the taxpayer was unable to undertake the maintenance by reason of circumstances attributable to the present war; and
(c) the expenditure upon that maintenance would have been an allowable deduction under s. 51 or s. 53 of the Act if it had been actually incurred by the taxpayer." (S. 53A(8).)

It was officially explained that s. 51 allows a deduction of all losses and outgoings actually incurred in gaining or producing the assessable income, or necessarily incurred in carrying on a business for that purpose. Losses or outgoings of a capital, private or domestic nature, are not, however, allowable deductions. Section 53 expressly allows as a deduction, expenditure (not being expenditure of a capital nature) incurred by the taxpayer in the year of income for repairs to income producing assets.

A deduction will thus be allowable in respect of the estimated cost of deferred repair and maintenance work such as the repair or maintenance of premises, plant, machinery, implements, rolling-stock or other assets held, occupied or used by the taxpayer for income-producing purposes. It is stated that primary producers will also be permitted to deduct the estimated cost of top-dressing and fertilising, or eradication of noxious weeds and animals, etc., provided the actual expenditure on such items would normally have been allowable deductions under s. 51 or s. 53 of the Act.

The procedure to obtain a deduction, set out in s. 53A(2), is as follows:

(a) make application in writing to the Commissioner during the year of income in which the need for the deferred maintenance first arose;
(b) furnish with the application a detailed statement of particulars of the deferred maintenance and the estimated cost thereof;
(c) pay to the Commissioner at the time of making the application a sum equal to the estimated cost of the deferred maintenance.

For the purpose of (a), if the need for maintenance arose during any of the years ended June 30, 1942-1944 inclusive, it is deemed to have first arisen during the year ended June 30, 1945 (s. 53A(6)).

Section 53A(3) authorises the Commissioner to allow as a deduction such amount as, in his opinion, is reasonable. It was officially explained that the purpose of this discretion is to safeguard the revenue against exorbitant claims.

If the amount allowed as a deduction is less than the sum deposited, the Commissioner must refund the excess to the taxpayer (s. 53A(4)).

The Bill provided for a minimum estimated cost of deferred maintenance of £100, but this limitation was excised on the motion of the Treasurer.

Example A

The net income of the A-Z Manufacturing Company Ltd. was £4,000 for the year ended June 30, 1945, prior to any provision being allowed for deferred maintenance. During that year the company lodged deposits of £2,000 with the Commissioner and was granted an allowance for deferred maintenance amounting to £500 in respect of each of the years 1942-1945. The taxable income for the year ended June 30, 1945, would then be calculated as follows:

Net income for year ended June 30, 1945, as above	£4,000
Less deduction allowed under s. 53A	2,000
Taxable income	£2,000

If the deduction allowable in respect of the four years ended June 30, 1945 (or substituted accounting periods) exceeds the amount remaining after deducting from the assessable income all other allowable deductions, and the Commissioner considers it would be just and reasonable in the circumstances to do so, the "total amount allowable as a deduction may be deducted partly from the assessable income of that year of income, and partly from the assessable income of any one or more of the three immediately preceding years of income" (s. 53A(7)).

The general objective is to deduct from the income of the year ending June 30, 1945, the estimated cost of deferred maintenance already accumulated and thereby to avoid the re-opening of assessments for past years to allow deductions in those years.

Nevertheless, it is officially expected that there will be cases where the net income of the year ending June 30, 1945, will be insufficient to absorb the deduction of the estimated cost of maintenance that has accrued since July 1, 1941. For example, the normal maintenance of a pastoral property may be £500 annually, so that the accumulated cost of maintenance from July 1, 1941, to June 30, 1945, would be £2,000. The net income of the pastoralist may have averaged £5,000 in the years ended June 30, 1942, 1943, and 1944, and may fall to £1,000 in the year ending June 30, 1945. In a case such as this, the net income of the year ending June 30, 1945, does not afford the opportunity of full deduction of the estimated cost of deferred maintenance. The Commissioner is accordingly empowered by sub-s. (7), having regard to the circumstances of any case, to re-open past assessments to allow appropriate deductions in those assessments.

Example B

B-Y & Co., a grazing partnership, had derived net income as follows before allowing for any deductions under s. 53A:

Year ended June 30, 1942	Net Income	£2,000
Year ended June 30, 1943	Net Income	1,000
Year ended June 30, 1944	Net Income	500
Year ended June 30, 1945	Net Income	600

Normal maintenance is estimated at £400 p.a. but has not been carried out because of war-time conditions. The firm makes application to the Commissioner during year ended June 30, 1945, for an allowance under s. 53A and forwards a cheque for £1,600. The allowance is granted.

Since the deduction allowable—£1,600—exceeds the net income for 1945, the Commissioner would have to exercise his discretion under s. 53A(7) and decide against which years' profits the deduction would be allowed.

One method would be as follows:

Year ended June 30—	1942	1943	1944	1945
Net income as previously	£2,000	£1,000	£500	£600
Less deduction for deferred maintenance		500	500	600
Amended net income	£2,000	£500	£nil	£nil

As the amount of the deduction allowed depends upon the opinion of the Commissioner, the taxpayer has been given the right of reference to the Board of Referees if he is dissatisfied with the Commissioner's decision (s. 53E(1)). The request for the reference must be made in writing to the Commissioner within 60 days after service of notice upon the taxpayer of the Commissioner's decision (s. 53E(1)). Upon every reference the Board of Referees shall review the decision of the Commissioner and shall give a

decision in writing either varying or confirming that decision (s. 53E(2)). Every such decision is final and conclusive (s. 53E(3)). The provisions relating to objections, reviews and appeals (Division 2, Part V) do not apply to any matter which may be referred to the Board of Referees under s. 53E(1). (S. 53E(4).)

Where the Board of Referees increases the amount to be allowed as a deduction, there will usually have been a refund to the taxpayer of the difference between his estimate of the cost and the amount allowed by the Commissioner. In such an event the taxpayer must repay to the Commissioner within 30 days after service of the Board's decision a sum equal to the amount of the increase (s. 53A(5)).

Repayments

Repayment of the deposits lodged with the Commissioner is to be made in the following circumstances:

(a) upon application in writing made at any time after the expiration of six months from the date upon which the sum was paid;

(b) where the taxpayer—

(i) dies;

(ii) becomes bankrupt or executes a deed of assignment or arrangement for the benefit of his creditors; or

(iii) being a company, commences to be wound up,

upon the Commissioner becoming aware of the death, bankruptcy, execution of the deed, or winding up; and

(c) in any other case—after the expiration of two years after the termination of the present war (s. 53B(1)).

Sums repaid under (a) and (c) above will be included in the assessable income of the taxpayer of the year of income in which they are repaid (s. 53B(2)). Sums repaid under (b) are deemed to be assessable income derived by the taxpayer on the day prior to the date of the death or other event mentioned in s. 53B(1)(b). (S. 53B(3).)

Example C

John Jones has been allowed a deduction of £450 for deferred maintenance in respect of each of the five years ended June 30, 1942-1946 inclusive, of which £1,800 was allowed in the assessment of income year ended June 30, 1945, and £450 in the assessment of the income year ended June 30, 1946. The war ends in 1946. During the year ended June 30, 1947, he expends a sum of £2,500 in necessary repairs to plant and he applies for repayment of his deposits, totalling £2,250. His profit, comprising assessable income less allowable deductions, for that year is £25,000. The result for taxation purposes is as follows:

Profit	£25,000
Add: Amount of deposits refunded included in assessable income by s. 53B(2) — (5 × £450)	2,250
	£27,250
Less: Cost of repairs actually incurred	2,500
Taxable income	£24,750

It is officially expected that the taxpayer will apply to the Commissioner for repayment of the deposit (or part of it) when labour and materials are

available and the taxpayer is in a position to undertake the deferred maintenance and that he will use the money so repaid for that purpose.

It is not provided that having obtained a refund of his deposit the taxpayer must carry out the deferred maintenance work or that, if he carries it out, he must obtain a refund of his deposits. Generally speaking, however, the repayments included in the taxpayer's assessable income will be offset by deductions for the expenditure actually incurred upon repairs and maintenance.

Excess Deductions

To prevent taxpayers from gaining benefits by exorbitant claims, new s. 53C(1) provides that where a deduction in respect of the estimated cost of the deferred maintenance of any property has been allowed under s. 53A of the Act and—

(a) it appears to the Commissioner that the amount of the deduction, or the total amount of the deductions, so allowed exceeds the amount which the taxpayer has actually incurred or will incur either prior to or within two years after the termination of the present war in undertaking that deferred maintenance; or

(b) that property is destroyed, discarded, sold, or otherwise disposed of before that deferred maintenance is undertaken,

the Commissioner may, if he considers the circumstances warrant it, determine the excess of the amount or total amount so allowed over the amount which it would be reasonable to allow.

Any excess so determined is included as assessable income of such year or years in which the deduction was allowed as the Commissioner determines. The amount to be included as assessable income upon repayment is then correspondingly reduced (s. 53C(2)).

Example D

Assume that in Example B the Commissioner determined under s. 53C(1) that the amount of the deduction allowed was excessive, £300 p.a. being a reasonable allowance for normal maintenance. The total excess would be £400—four years at £100 p.a.

He would then be empowered under s. 53C(2) further to amend the net income of the partnership as follows:

Year ended June 30—	1943	1944	1945
	£	£	£
Amended net income as previously .	500	nil	nil
Add amount of reduction in allowance under s. 53A—			
1943 5/16 × £400	125		
1944 5/16 × £400		125	
1945 6/16 × £400			150
Net income as further amended ..	£625	£125	£150

It is assumed in the above example that the Commissioner apportions the excess in the same ratio as the original deduction.

Expenditure for Enemy Raids Precautions

Section 72B was enacted in 1942 to provide for the deduction of expenditure incurred for the protection of persons or property from enemy action in connection with premises used for the production of assessable income, e.g., expenditure upon air-raid shelters, or the bricking up of doors or windows.

The section did not provide for allowing as a deduction the cost of demolishing any of these structures. This is remedied by the insertion of new s. 72B(1) by the Income Tax Assessment Act (No. 2), 1944. A deduction is now allowed in the year of income for expenditure incurred in demolishing or removing any such means of protection where the premises are owned or used by a taxpayer primarily and principally for the purpose of producing assessable income or in carrying on a business for that purpose.

The new concession is to operate for the income year ended June 30, 1944, and subsequent years, and is to be allowed irrespective of whether the protective structures were erected by the taxpayer or were acquired by him at the time of purchase of the premises.

A consequential amendment is made in s. 72B(4) so as to include in assessable income amounts received or receivable in respect of the sale of goods or materials obtained by the taxpayer from the demolition or removal of enemy raids precautions structures.

Concessional Rebate for Children Between the Ages of 16 and 18 Years Who Are Receiving Full-time Education

Under new s. 160(2)(bb) resident taxpayers will be allowed a rebate in respect of income year ending June 30, 1945, and subsequent years in respect of each child (not necessarily a child of the taxpayer) who—

(i) is a resident;
(ii) is not under sixteen years of age but is under eighteen years of age at the beginning of the year of income;
(iii) is receiving full-time education at a school (including a technical school) or a university (including a university college); and
(iv) is wholly maintained by the taxpayer.

The rebate will be calculated upon an amount of seventy-five pounds, less the value of any assistance (consisting of money, accommodation or sustenance) provided by the Government of the Commonwealth or of a State, during the year of income, in connection with the education of the child.

Where a child—

(i) attains the age of sixteen years or eighteen years during the year of income;
(ii) receives full-time education at a school (including a technical school) or a university (including a university college) during part only of the year of income; or
(iii) is wholly maintained by the taxpayer during part only of the year of income, or is partially maintained by him during the whole or part only of the year of income,

the amount for the purposes of this paragraph shall be such amount (not exceeding seventy-five pounds) less the value of any assistance (consisting of money, accommodation or sustenance) provided by the Government of the Commonwealth or of a State, during the year of income, in connection with the education of the child, as, in the opinion of the Commissioner, is reasonable in the circumstances.

In determining, for the purposes of this paragraph, whether a child is wholly or partially maintained by a taxpayer, any assistance provided, in connection with the education of the child, by the Government of the Commonwealth or of a State, or by means of a scholarship, bursary, exhibition or prize, is not taken into account.

The maximum rebate is £45 in respect of each child. This maximum operates when the taxable income exceeds £3,202.

It is officially explained that a taxpayer will not be disqualified from the allowance of the rebate on the ground that the child is not wholly or partially maintained by him because certain forms of assistance are provided in connection with the education of the child. Where such assistance is provided by the Commonwealth or a State or where the child is receiving full-time education with the aid of a scholarship, bursary, exhibition or prize, this assistance will be disregarded in determining whether the child is wholly or partially maintained by the taxpayer. For example, a parent who wholly maintains his child attending a college, the fees of which are paid from some scholarship fund, would be entitled to the full rebate. If, however, any assistance answers the description of assistance (consisting of money, accommodation or sustenance) provided by the Government of the Commonwealth or of a State, the value of such assistance is deducted from the amount upon which the rebate is calculated.

The Treasurer stated that where the maintenance of the child is shared by two or more persons each of these persons will be entitled to a proportionate part of the rebate. For example, the father and an uncle of the child may contribute £40 and £35 respectively towards the child's maintenance during the year of income. In such a case, the father would be allowed a rebate based on £40 and the uncle would be allowed a rebate based on £35.

The concession will apply as from 1st July, 1944, i.e., in assessments based on income derived during the year ending 30th June, 1945. Provision is made, however, for an immediate reduction in the tax instalment deductions made from salaries and wages where the taxpayer is entitled to the concession.

Example:

A has three children, born on March 1, 1928, July 3, 1930, and April 10, 1935, respectively. All are residents and the children are wholly maintained by A. The eldest is a student at a university, and during year ended June 30, 1945, received assistance from the Commonwealth valued at £50. A's taxable income for that year was £996. The rebates to which he is entitled in respect of his children are these:

First child: Rebate on £25 (£75 less £50)—s. 160(2)(bb)—	
£25 @ 85·2010d. in £	£8 17 6
Second child: Rebate on £75—s. 160(2)(b)(i)—	
£75 @ 85·2010d. in £	26 12 6
Third Child: Rebate on £30—s. 160(2)(b)(ii)—	
Maximum rebate	8 0 0
	£43 10 0

Concessional Rebate in Respect of Medical and Dental Expenses

Section 160(2)(d) of the Commonwealth Income Tax Assessment Act has been amended to provide for a rebate in respect of payments (*other than payments to which new s. 160(2)(da) applies,* see below) made by a resident taxpayer in the year of income to any legally qualified medical practitioner, *dentist,* nurse or chemist or to any public or private hospital, in respect of any illness of or operation upon, *or dental services or treatment rendered to,* the taxpayer or his spouse, or any of his children under the age of 21 years if the spouse or child is a resident.

(The words italicised indicate the provisions added by the Income Tax Assessment Act (No. 2) 1944.)

It is further provided that—

(1) if the total sum of the payments made in respect of dental services or treatment rendered to any such person exceeds ten pounds, the amount of the excess shall not be included for the purposes of this paragraph; and

(2) if the total sum of all the payments made in relation to any such person, after deducting therefrom the amount (if any) required to be excluded by the last preceding sub-paragraph, exceeds fifty pounds the amount of the excess shall not be included for the purposes of this paragraph.

Under new paragraph (d) a taxpayer will be allowed a concessional rebate on payments up to £50 in each case in respect of himself, his wife, and each of his children under 21 years. Formerly the limit was £50 in respect of the taxpayer, and his dependants. For the purpose, however, of determining the maximum rebateable amount of £50, dental expenses to the extent of £10 per person are treated as medical expenses, i.e., the £50 is the upper limit of both medical and dental expenses combined.

The above concession is to operate in connection with assessments based upon income derived during the year ending June 30, 1945, and subsequent years.

Example 1

A taxpayer pays dental expenses of £15 for himself, £5 for his wife, and £8 for each of three children. The concessional allowance will be based on £39, the rebateable amount in respect of the taxpayer being limited to £10.

Example 2

A taxpayer pays £45 medical expenses and £20 dental expenses in respect of a child under 21. He will receive in respect of that child a rebate based on the maximum amount of £50.

Example 3

A taxpayer pays £35 to his doctor and £25 to his dentist for treatment received during the year of income. The rebate will be calculated upon an amount of £45 only, comprising:

Medical expenses	£35
Dental expenses (maximum)	10
	£45

Example 4

A taxpayer pays £15 to doctors in respect of treatment for himself and £30 in respect of his wife; £23 to a hospital in respect of his wife, and £12 to a dentist in respect of his daughter, aged 18. A concessional rebate would be allowed as follows:

Taxpayer:	Medical expenses	£15.	Rebate allowed on	£15
Wife:	„ „	£53.	„ „ „	50
Daughter:	Dental „	£12.	„ „ „	10
				£75

Concessional Rebate in Respect of Payments made for Artificial Limbs and Eyes

A new paragraph (da) inserted in s. 160 (2) by the Income Tax Assessment Act (No. 2), 1944, allows a rebate on the amount of any payments made by the taxpayer during the year of income in respect of any artificial

limb (or part of a limb) or artificial eye required for the personal use of the taxpayer or his spouse, or any of his children under the age of 21 years, if the spouse or child is a resident. No limit is set to the amount of the expenditure which may be rebated under this paragraph or to the amount of the rebate.

The above concession is to operate in connection with assessments based upon income derived during the year ending June 30, 1945, and subsequent years.

Provisional Tax Where Taxable Income Comprises Partly Salary or Wages and Partly Other Income

In the August issue of the journal an example was given on page 280 to illustrate the effect of the Commissioner's ruling in regard to setting off concessional rebates primarily in reduction of tax applicable to income from salary or wages.

The Commissioner of Taxation has now given a further ruling upon the application of s. 221YC(1)(b). This section provides that "Subject to this section, the amount of provisional tax payable by a taxpayer in respect of the income of any year of income shall be—

> ". . . (b) where the assessable income derived by him in that next preceding year comprised salary or wages together with other income—an amount equal to such part of the income tax so assessed as the Commissioner determines."

The Commissioner states that the provisional tax will be the equivalent of that part of the tax assessed for the preceding year that is attributable to the inclusion in the assessment of income derived from sources other than the employment of the taxpayer. The provisional tax so determined, when combined with the tax deductions made from the taxpayer's salary or wages, will, in most cases, approximate the amount of tax that will be finally assessed on the total taxable income of the taxpayer.

Taking the same case as before, the following is an example of how the provisional tax would be calculated in accordance with the principles enunciated by the Commissioner:

Actual assessment in respect of income derived during year ended June 30, 1945:

		Personal exertion	Property (rents)	Total
Salary	£800			
Income from business	200	£1,000	£200	£1,200
Rate		90·5167d.	112·8417d.	
Gross tax		£377 3 1	£94 0 8	£471 3 9
				= £471 4 0

Less concessional rebates:		
Wife	£100	
Only child	75	
Life assurance premiums	50	
Medical expenses	25	
	£250	
£250 at 90·5167d. in £		94 6 0
Total tax upon 1944-1945 income		£376 18 0

Provisional tax payable for 1945-1946:

1944-1945 tax as above		£376 18 0	
Less proportion of tax applicable to salary:			
£800 at 79·625d. in £	£265 8 0		
(rate applicable to an income £800 only)			
Less concessional rebates:			
£250 at 79·625d. in £	82 19 0		
		182 9 0	
Balance being tax applicable to income other than salary		£194 9 0	
Amount of Provisional Tax for 1945-1946			£194 9 0

The assessments received during 1945-1946 would be as follows:

(a) *Final Assessment for 1944-1945*	
Total tax upon 1944-1945 income as above	£376 18 0
Less provisional tax paid for 1944-1945 (based on income for 1943-1944), say	160 0 0
	£216 18 0
(b) Provisional tax for 1945-1946 as above	194 9 0
Total indebtedness (excluding any part of 1943-1944 tax carried forward under s. 160AM)	£411 7 0

Payment of the above amount during year ending June 30, 1946, would be effected as follows:

(1) Group certificate (deductions July 1, 1944, to June 30, 1945)	£189 3 0
(2) Cash payment	222 4 0
	£411 7 0

Pay-As-You-Earn

Prior to and during the passage of the Bill this year containing the pay-as-you-earn provisions, controversy raged in the daily Press as to whether taxpayers were receiving a remission of three-fourths of the tax on their incomes of the year ended June 30, 1944, or whether they were bearing an extra impost of one-fourth of the tax on that income. In other words, was there a tax lag or not?

There are few things nearer my heart than a taxation dog-fight, but temporary (I hope) blindness prevented me from joining battle. I merely mention this fact by way of apology to readers for the absence of any discussion of the subject in this journal when the dog-fight was in progress.

In my opinion, the "tax lag" was a pale pink herring which led to a great deal of confusion of thought.

Before the controversy started, there was no doubt in the mind of any taxpayer that he would have to pay tax on every penny of his taxable income, including (since the abolition of s. 221) that earned by him during the last year of his life.

The Commonwealth Government would have been legally justified in

demanding the whole of the tax payable on income derived during the year ended June 30, 1944. Therefore, in my opinion, the Government did a very handsome thing in remitting three-fourths of that tax. There is a short-run compensatory gain to the Treasurer in that he will receive a greater revenue from income tax during the years ending June 30, 1945, 1946 and 1947, but in the long run the revenue will definitely lose the three-fourths tax so remitted. This loss will take place over the course of the lives of present taxpayers, say, thirty years.

The short-run gain and the long-run loss are illustrated by the following example:

(A) *Old Basis*

1943	Taxable income	£2,650 0 0	
	Tax		£1,454 6 0
1944	Taxable income	3,500 0 0	
	Tax		2,180 8 0
1945	Taxable income	4,000 0 0	
	Tax		2,622 2 0
1946	Taxable income	5,000 0 0	
	Tax (assuming a 5% reduction on 1943 rates)		3,353 18 0
1947	Taxable income	6,000 0 0	
	Tax (assuming a 10% reduction on 1943 rates)		4,009 17 0
1948	Taxable income	4,000 0 0	
	Tax (assuming a 15% reduction on 1943 rates)		2,228 16 0
1949	Taxable income	500 0 0	
	Tax (assuming a 20% reduction on 1943 rates)	109 6 0	
1950	Taxable income to date of death—April 30, 1950—9 months at £500 per annum	375 0 0	
	Tax (assuming a 25% reduction on 1943 rates)		63 19 0
	Totals	£26,025 0 0	£16,022 12 0

(B) *New Basis*

1943	Taxable income	£2,650 0 0	
	Tax		£1,454 6 0
1944	Taxable income	3,500 0 0	
	Tax (assuming s. 160AJ applied by Commissioner to grant rebate of 75%)—		
	Gross tax £2,180 8 0		
	Less rebate 75% 1,635 6 0		
	Tax payable £545 2 0		
	One-third £181 14 0		
	Provisional assessment 2,180 8 0		
			2,362 2 0

1945	Taxable income		4,000 0 0	
	Tax	£2,622 2 0		
	Less provisional tax	2,180 8 0		
		£441 14 0		
	Add second instalment a/c. 1944 tax	181 14 0		
		£623 8 0		
	Add provisional assessment	2,622 2 0		
				3,245 10 0
1946	Taxable income		5,000 0 0	
	Tax	£3,353 18 0		
	Less provisional tax	2,622 2 0		
		£731 16 0		
	Add third instalment a/c. 1944 tax	181 14 0		
		£913 10 0		
	Add provisional assessment	3,353 18 0		
				4,267 8 0
1947	Taxable income		6,000 0 0	
	Tax	£4,009 17 0		
	Less provisional tax	3,353 18 0		
		£655 19 0		
	Add provisional assessment	4,009 17 0		
				4,665 16 0
1948	Taxable income		£4,000 0 0	
	Tax	£2,228 16 0		
	Less provisional tax	4,009 17 0		
	Credit balance	£1,781 1 0		
	Less provisional assessment a/c. 1948-49	2,228 16 0		
				447 15 0
1949	Taxable income		500 0 0	
	Tax	£109 6 0		
	Less provisional tax	2,228 16 0		
	Credit balance	£2,119 10 0		
	Less provisional assessment a/c. 1949-50	109 6 0		
	Amount refunded to taxpayer			*2,010 4 0*
1950	Taxable income		375 0 0	
	Tax	£63 19 0		
	Less provisional tax	109 6 0		
	Amount refunded to estate			*45 7 0*
			£26,025 0 0	£14,387 6 0

Comparison: Paid in year ended June 30	Old Method	New Method
1944	£1,454 6 0	£1,454 6 0
1945	2,180 8 0	2,362 2 0
1946	2,622 2 0	3,245 10 0
1947	3,353 18 0	4,267 8 0
1948	4,009 17 0	4,665 16 0
1949	2,228 16 0	447 15 0
1950	109 6 0	*2,010 4 0*
1951	63 19 0	*45 7 0*
	£16,022 12 0	£14,387 6 0

The difference of £1,635/6/- is equivalent to the amount of the forgiveness in 1944.

The following offsets to the Government should be noted:

(a) Use of additional income—

£181 14 0	for 6 years at (say) 3¼% ..	£35 8 8
623 8 0	for 5 years at (say) 3¼% ..	101 6 0
913 10 0	for 4 years at (say) 3¼% ..	118 15 1
655 19 0	for 3 years at (say) 3¼% ..	63 19 1
£2,374 11 0		£319 8 10

Less loss of income—

£1,781 1 0	for 2 years at (say) 3¼% ..	£115 15 4
2,119 10 0	for 1 year at (say) 3¼% ..	68 17 0
109 6 0	for 0 year at (say) 3¼% ..	– – –
4,009 17 0		£184 13 0
£1,635 6 0	*Net gain*	£134 15 10

(b) At April 30, 1950 (date of death), there is an asset under the new system of	£45 7 0
instead of a liability under the old system of	63 19 0
A difference of	£109 6 0

Governmental revenue gains as follows—

New South Wales State Probate Duty—say, 32% of £109/6/- .. .. =	£34 19 6
Federal Estate Duty—say, 25% of £74/6/6 (£109/6/- less £34/19/6) .. .. =	18 11 7
Total gain	£53 11 1

The Government will certainly have a short-run gain over 1945, 1946 and 1947, but the long-run loss will be minimised because, as soon as revenues are in danger of falling because of the tax remission, the Government will increase rates or, what is the same thing, will refrain from reducing rates. Thus, present taxpayers will in part pay for their own forgiveness, but the bulk of the remission will be at the expense of taxpayers who fall into the taxation net during the year ended June 30, 1945, and subsequent years.

Ploughing Grant Made By Government For Ploughing Up Pasture Land

A dairy farmer received a grant of £662 under the (English) Agricultural Development Act, 1939. The farmer contended that the grant was a capital receipt because the ploughing up of the land effects either a capital improvement or capital depreciation—in this case it did in fact effect a capital depreciation. Furthermore, in the case of a dairy farmer who had not the implements required for ploughing, the grant ought to be regarded as a contribution towards the capital expenses which he as a dairy farmer would have to incur in buying the various implements required in the case of an arable farmer, as well as possibly the erection of buildings for storing them.

Held (by Macnaghten, J., in the King's Bench Division) that the grant must be included as a receipt in the computation of his farming profits for the year in question. (*Clyde Higgs v. G. N. Wrightson* (H.M. Inspector of Taxes) [1944] 1 All. E.R. 488).

Section 26 (g) of the Commonwealth I.T.A. Act provides for the inclusion in assessable income of "any bounty or subsidy received in or in relation to the carrying on of a business."

Valuation of Trading Stock

By "Veteran of 1918"

Last month's timely article by Mr. J. A. L. Gunn raises the problem which confronts traders to-day. Their shelves contain stocks of inferior goods purchased at high prices, which will have to be jobbed out as soon as articles of better quality become available. Even now shoppers are tending to pay more attention to quality, and to make do with what they have till peace brings higher standards and lower prices.

It would be a foolish and imprudent trader who did not discount his war-time stocks under these conditions. If he does not thus conserve his resources, his inflated war-time profit will be dissipated by taxation and spending, and when the drop comes his business existence will be jeopardised.

In normal times traders have adopted a regular practice of marking stocks down at annual stocktakings according to age and condition. Sometimes articles are separately valued and sometimes a regular scale of percentages is applied to a whole class of goods. Such practices do not strictly comply with the provisions of s. 31 of the Commonwealth Income Tax Assessment Act, which requires each article of stock to be valued at cost price, market selling value or cost of replacement. Nevertheless, these practices have come to be recognised as commercially sound. Now, however, an inflated market is upon us, and businessmen who are consistently following the same method of stock valuation as in the past find themselves in the position that their balance sheets, for taxation purposes, are illegal.

As Mr. Gunn puts it, these balance sheets require to be legitimatised. His suggestion is that taxpayers should be given the right to value closing stocks at the prices ruling on July 1, 1938.

In my view, whilst this suggestion would meet the situation to some extent, it does not go far enough and would be difficult to apply in practice.

I would suggest a simpler solution—one for which there is a precedent very close at hand. Under s. 32 of the Income Tax Assessment Act, primary producers, like other traders, must value their stock on hand (i.e., live stock) at cost price or market selling value. But a proviso is added reading as follows:

"Provided that, where a taxpayer satisfies the Commissioner that there

are circumstances which justify the adoption by him of some value other than cost price or market selling value for the whole or part of his live stock, he may, with the leave of the Commissioner, adopt that other value."

All that is needed is to insert a similar proviso in s. 31 and thus place all traders in an equal position.

It should not be difficult to satisfy the Commissioner or, failing him, the Board of Review, that circumstances justify certain bases of valuation contended for—in fact, the Commissioner would thereby be given an opportunity of issuing a set of rules which would legitimatise various methods of stock valuation now used in different industries. This would meet all legitimate (or legitimatising) claims, and, from the Commissioner's point of view, the trader who reveals his method of stock valuation by seeking approval is less likely to defraud the revenue by an unwarranted stock reserve.

Materials Control for Production Efficiency

By The Australasian Institute of Cost Accountants.—Research Group

A.—Importance of Material Accounting

Material accounting and co-ordination of materials with production requirements is a present-day problem.

Detailed records, statistical data, close control over raw materials usage and stock turnover, and the keeping of stocks in balance are of vital importance to management.

Two-thirds of all the gain possible through the most efficient management of production will be realized by having all the material ready when you want it, where you want it and in the condition you want it. (Gantt.)

When the materials are difficult to obtain, that available must be put to the best use, stocks kept in balance, and work in progress, and finished stocks must be kept at a minimum. This can only be done by adequate planning and control.

Production efficiency so largely rests on the proper control of materials that its importance has prompted the Research Group to endeavour to elucidate sound storekeeping procedure and the principles and methods of control with particular application to Australian conditions.

It is hoped that this summary of the various aspects of stores control will provide accountants and managers with a ready means of checking over the system in operation in their own business for the purpose of evaluating its effectiveness and indicating lines of improvement.

Procedures must necessarily be set out in detail in some directions, and in a general way in others, modifications being necessary in particular instances to suit different businesses.

B.—Control: Its Meaning and Implications

The reason for control is the elimination of waste and loss in the use of material, in the increased turnover of finished stock and in its safe custody. The degree of control operating is reflected in the extent to which loss and waste are kept near to the minimum.

Stores recording can take an important and definite part in the elimination of waste, but unless it is used in this way it may cost more than it is worth.

There must be control of the movement of material, which is as important as the control of its custody.

Control of material is an integral part of the production planning programme. Material control involves:

(1) Methods and records, i.e., the means and tools of control.
(2) Executive action.

There is only adequate control where executives are supplied with timely information and take effective action.

C.—Scope of Control

Control must be exercised over all types of material, such as raw materials, finished stocks, component parts, general stores, and other items which can be identified and stored.

Control will involve the planning of the procedure, records and responsibilities of the various stores activities, such as procuring, receiving, storing and issuing.

The whole phase from the procurement till the final disposal on sale, must be covered.

D.—Organization and Personnel

Organization is the "set up" of the lines of authority, responsibilities and duties, and includes the method of operation of the duties, the recording required, the internal check, etc.

The Chief Storeman should be carefully selected, and must have an orderly type of mind and organizing ability.

Points to be kept in mind in organizing to obtain effective control are:

(1) Instructions detailing the duties, and the best methods of carrying them out, should be set out in writing and enforced.
(2) The Storeman should specialize in his job of custodian and distributor of stores.
(3) A plan for the purchase, and the limitation of stocks and keeping them in balance should be instituted under the control of the accounting section or production men. A special planning section may be operated.
(4) The Chief Cost Accountant will have functional charge of determining recording methods and the use of forms. He will be responsible for the financial position and the adequate turnover of stock to ensure the earning of the best profit percentage. He must watch excessive stocks, and should be in a position directly to supervise the stock turnover and organize the records and checks on stock limits.
(5) The production men will be responsible for setting out the specification for the purchasing and production schedule with quantities of materials required. The safety limits of stocks will be decided with their collaboration.

E.—Custody: Physical Control

Effective physical control requires that:

(1) The Chief Storekeeper shall have sole responsibility for the custody of the stores and the authorities and means of excluding unauthorized persons from Stores locations.
(2) All materials should be stored safely, with easy access, and under supervision.
(3) Central stores and sub-stores should be convenient to production centres to ensure minimum handling and walking to and from the store. The store is a feeder to production centres and should fit in to the sequence of production. Receiving and despatch stores should have easy access to main stores.
(4) Proper storage equipment facilities, adequate handling devices and correct layout should be provided to reduce the costs and assist in the efficient functioning of the store, e.g., adequate housing, lighting, orderly binning and stacking.

(5) A place should be allotted for everything and everything should always be in its place. Articles of a standard nature should generally be stored together in sequence of size, and in suitable fixtures—screws, washers in bins, lengthy bar iron in racks.

F.—Index or Stores Vocabulary

There should be a proper system of classification and coding—

(1) to provide orderly arrangement;
(2) to serve as an index to stores ledger and records;
(3) to enable all to speak the same language;
(4) to speed up pricing and maintain the accuracy thereof.

Under the description of Stores Vocabulary, one large public utility issues a classified list of the stores items used, to serve as a guide and maintain a uniform stores nomenclature throughout the various activities. Any additions or alterations are made only through the Controller of Stores at Head Office. All items requisitioned for purchase or withdrawal from store are described in accordance with the stipulated vocabulary list.

The distinguishing symbol numbers, in addition to cataloguing the various items, constitute an additional guide to ensure correct posting to stores records. To this end, at the outset, the physical division of the stores into different "lines" and the division of the stores ledger must be maintained as closely as possible.

To each line in the stores is attached its distinguishing symbol number, and all records are marked similarly, including all entries in stores records.

G.—Accounting Procedure

Purposes of Recording

Stores Records should:

(1) Locate the goods and indicate who is responsible for their custody, etc.
(2) Analyse adequately the cost of stores used—where, how and why.
(3) Ensure that all materials are charged to a unit of production, an expense classification, or a buyer.
(4) Supply quickly the value and quantity of each item on hand.
(5) Disclose the movement or turnover of stores and any departure from plan or time-table.

Need to Specify Requirements

There must not be any confusion as to what materials or stock are required for production.

Requirements should be clearly defined in writing, by way of a specification.

The specification of the raw material for each part, or if a part is purchased, a specification of the part itself, should be determined carefully and recorded on a card. The exact description of material, grade, size, etc., and quantity to produce one part should be given. The specification card will link up with the production order and the purchasing order.

Purchasing Methods and Records

Materials require to be procured, not merely bought. The right goods must be provided at the right time, in the right quantities as well as at the right price.

(1) *Right Goods.* Purchasing in most businesses should be carried out to a specification of requirements laid down by the production men. No doubt exists then as to what is wanted, and a close tie-up between production and purchasing men is provided.

The desired quality of the goods received will be ensured by a definite inspection procedure.

(2) *Right Time.* The buyer must ensure that the specified goods are available when required. Production must not be delayed for lack of right materials. Goods should be delivered at the latest date possible to avoid excess finance and storage costs.

A follow-up record should be kept of all orders placed and deliveries promised, and contact maintained with suppliers to ensure that promises are fulfilled.

(3) *Right Quantities.* Requests for purchases will be initiated by the stores or planning clerk:

(a) At the request of the production men for specific production requirement;

(b) According to a planned schedule, or—

(c) On stocks being reduced to a predetermined ordering limit.

There should be a definite procedure for purchasing, emanating from a parallel definite plan of production initiation and planning.

(4) *Right Price*

(a) The price paid should not be higher than that paid by competitors in similar circumstances.

(b) A classified index of prices paid for past purchases should be in operation, together with complete records of sources of supply and up-to-date current market information.

(c) Good buying cannot be achieved unless records of prices and all business transactions are kept in a convenient and systematic manner.

(d) Control of the price being paid, and the disclosure of loss due to higher prices being paid than expected, can be quickly and conveniently obtained by throwing out the variation of price paid from price allowed on estimate as an automatic procedure in writing up the purchase book.

(e) There should be some measure of standardization. It pays! Apart from the main materials, screws, bolts, files, etc., should be limited, as far as practicable, to a number of main types properly spaced over the range required.

Receiving Methods and Records

Storemen should be forewarned automatically of all expected deliveries and dates.

All goods should be received by the storeman, and wherever possible pass through the store, or at least come first into the custody of the storeman.

To ensure that actual count and inspection is carried out, invoices should not go to the store. All goods should be checked as to quantity and quality as early as possible.

A record should be kept of all deliveries and an advice sent to office daily, setting out date received, name of supplier, quantity and description of goods and purchase order number.

It is an advantage to use extra copies of the purchase order as a material received report in order to eliminate a special report.

As the store is the official distribution centre, goods on receipt should be stacked or marked to indicate quantity, quality and kind of goods.

A definite procedure should be laid down as to the receipt of the materials, their distribution, checking of quantities and prices on invoices and entering in books.

The office should check invoices with purchase orders and receiving records and verify the rates and extensions.

Issuing Methods

The quality, amount and type of material required for production should be clearly specified. Each article issued should be for a specified job or process.

Material should be issued only in accordance with specific production needs, against bills of materials or requisitions for specific production quantities.

Issues to replace wastage or spoilage should only be made at the management's direction or otherwise brought to the notice of the management immediately.

Standards of quality and materials performance need to be fixed, and continuous reports on actual condition against standards are advisable.

Issues for each day should be planned in advance and made at regular intervals.

No issue should be made without a written request by an authorised person.

Authority to requisition and issue should be limited.

Wherever possible, on replacements being made old equipment should be surrendered.

Where materials of irregular or different lengths, areas, etc., are taken from larger sizes or bulk materials a technical man should decide on sizes to be issued to give most economical results and avoid excessive off-cuts. Issuing the next largest size may not be the answer.

Indirect materials and miscellaneous supplies should be issued against standing works orders; preferably a weekly allowance should be fixed. Issues only to special persons selected for each department are advisable.

Emergency supplies for urgent maintenance work, etc., may be handled on the imprest system. Stocks can be taken monthly and requisition made for deficiencies.

Any large usage should be backed by a special report.

Accountability

Records are necessary to ensure that the storeman accounts for all stores that should be in his possession, and also to ensure that stores are not misplaced.

The factors involved are:

(1) Responsibility and check—
  (a) Whether accounts should be kept by value or by physical units.
  (b) Methods of stock check.
(2) Location and availability—
  (a) Degree of analysis considered necessary.
  (b) The relative costs and benefits of planning.

Raw Material (Direct, Indirect) and Finished Stocks

Accounts are necessary for the various classifications of stores to show the amount of stores that the storemen should have in their custody. These accounts comprise the Stores Ledger.

The debits to these accounts come from the suppliers' invoices, checked by the storeman's receiving slips. The credits are made only on production from the storemen of written store releases properly authorised.

The storeman may be called upon to account for stores in terms of:

(1) Physical units.
(2) Units of value.

Whether records should be kept by physical units as well as in value resolves itself into a question of cost versus benefit, which is discussed later.

Where unit control is desirable, a separate record must be used for each unit classification of stock item. When stores are received, the quantity and other information on the invoice, transfer or production slip is entered in the records. Deductions are made for units issued, transferred out, or

sold. This information is obtained from the issue records, transfer slips or sales dockets. If this is done daily, then for any classification of stores the number of units in stock can be quickly ascertained.

Inventory recording by value may be obtained by recording stores received and issued at actual or standard cost, under the major classification as to the kind or nature of store item and the location of the stores. Standard cost has the advantage of less work and incorporates the disclosure of the extent of the variations between actual and standard costs. Actual costs of various lots of stores received will vary, and issues may be priced at average, replacement first in-first out or last in-first out, which causes complications and requires some recording of quantities.

Finished stocks may, as well as being priced at actual, be accounted for on the basis of:

(1) *Estimated Cost*—obtained by reducing the sales value to cost by deducting an estimated gross profit margin.

(2) *Selling Value*—finished stock being charged to a department at selling price. After being credited with sales, the department must account for stock at selling value for the difference. This is only practicable for standard fixed price goods, and reductions and allowances on sale prices must be recorded.

If desired, an estimated cost value of stock can be obtained by applying the ratio of the cost of goods purchased to the retail price to the sale values of those goods.

To obtain any degree of control, separate accounts must be kept for each individual type of store, parts, finished stock and raw materials.

The stores ledger should not be under the control of the storeman, although where his duties demand it, the information therein can be made accessible to him.

It is preferable that the planning of the purchases and production requirements should be carried out by a production or clerical man as distinct from the storeman. Then the greatest control is possible and the storeman needs no accounts or records other than the copy of the requisition, stores index, bin cards and delivery dockets.

Work in Progress

Greater control and the minimum amount of work in progress, giving less waste in production will be obtained by programming the priority of production orders and the sequence of the processes of each. The dates of influx of parts for a final assembly must be co-ordinated.

The progress of the materials and parts over the production route must be known, and should be to a planned sequence and time-table.

Production cards or tally sheets should be used to record material quantities and parts in progress and their location.

Rejects or changes from planned yield must be disclosed as early as possible after they occur.

Control accounts in financial values are advisable to cover value of work in progress by departments and processes.

Production orders or batch cards may be used to record the quantities of particular types of materials being processed.

Two examples regarding identification of spoilages may be given:

(1) In a brush factory the control rests on the Production Order and standard Bill of Materials. The employees must account for the equivalent finished goods; spoilt work and wasted material must be disclosed to obtain additional material to complete the order.

(2) In a Wood Heel factory a route card is issued to cover each batch of blanks put into process. Units completed at each operation are entered on the route card. The decreased number of units passed into the next process discloses when and where spoilages occur.

Stock Availability and Movement

What detail is required in the Stores Ledger?

This depends greatly on the type of business and the necessity for production planning.

To plan production it is necessary to know continuously the quantities of the more important stores items on hand, the rate of turnover, and the period of time stocks on hand will suffice for production needs.

A broad summing up of the Australian practices studied is, that the recording of values under types or groups of stores often proved sufficient as a check on "custody." The losses or discrepancies disclosed did not warrant the extra cost involved in detailed recording by physical units.

Where, however, it was desired to operate a definite scheme of production planning, control and limitation of stock investment, the recording of the quantities of the main lines of material parts and finished stocks was necessary.

Without details of the quantities of the various raw materials and parts, little effective production planning appears to be possible.

Recording physical units enabled stocks to be kept adjusted to production and sales requirements.

With minor materials it is a question of the number of entries involved, the total value of the items and whether the items are easily procurable. If the value used over a year is not high and the quantities used great, then the cost of recording will not pay. However, if they are on short supply and essential to production then a control over quantities is essential to avoid production hold-ups.

Where planning is handled adequately it is so profitable that the cost of necessary detail recording of physical units is a comparatively small offset.

One firm, whose stocks, at any one time, consist of 2,000 material parts and finished units, operates a production control plan which is largely composed of, and only made possible by, strict unit recording of material even down to screws and bolts.

The accountant of this firm claims that production would drop by possibly up to 40% if the detailed unit recording were not operated, apart from making the financial position unworkable.

The clerical cost is equivalent to the wages of six clerks, mainly female labour.

Much the same remarks apply to some finished stocks, as making the wrong articles clogs production and increases financial costs.

Unit records are frequently used for reserve stocks to ensure that replacements are available for retail shops where the units are fairly large.

Unit card methods are often used for this purpose. The advantage of unit recording depends on the value of the lines, the rate of turnover and the method of selling.

Unit recording enables a closer tie-up of selling policy with production plans and elimination of slow-selling lines.

Rejects and Scrap

For effective control the following are desirable:

(1) Early disclosure of rejects or excess scrap.
(2) Responsibility identifiable to a person or a location.
(3) Analysis of cause.
(4) Immediate executive action to avoid repetition.
(5) The effect on the profit must be measured and brought to the notice of the management.

Check by Physical Stocktake

The stores in the custody of the storemen should be physically counted at least once a year.

Regular sectional check is advisable for complete control and to ensure that discrepancies are disclosed sufficiently early for investigation or to avoid becoming serious. It has a strong moral effect.

Where there are adequate stores records and periodical physical checking, the annual stocktake can be dispensed with, but some firms still require an annual check in addition.

Losses and Deficiencies

Discrepancies, store shortages and overs should be enquired into carefully, in order to identify causes, such as:

(1) Clerical error—e.g., failure to obtain requisition, or requisition not according to issues.
(2) Wastage, pilferage, or careless weighing.
(3) Insufficient allowance for processing losses.

All corrections to Stock Ledger Balances shall be listed and properly authorised.

H.—Financial Control

The limitation of investment in stock available from the Books of Accounts primarily rests on:

(1) Disclosing the value of the goods on hand of various classes.
(2) Disclosing the material cost of each job, or expense classification, and comparing it with an estimated cost or budget.
(3) Interlocking the separate material accounts by control accounts with the financial figures in the General or Cost Ledger and so making them a part of the double entry system.

Secondarily, financial control rests on:

(1) Fixing an investment optimum and maintaining it, and
(2) Supervising the rate of turnover of stocks.

The limitation of buying and stock investment may be obtained by:

(1) Fixing maximums and minimums for the various classes of stocks;
(2) Use of budgets;
(3) Purchasing for specific production plans.

The higher the rate of stock turnover the lower is the capital employed, and expense items such as interest, obsolescence, insurance and storage costs are reduced. The ideal is to have no stores in stock, but this is rarely possible. Motor car assembly companies may have batteries and tyres for one day's production delivered to the assembly line.

The determination of the quantity of parts in production batches is a financial matter of importance and has to do with the limitation of stocks. The economical lot to manufacture can be indicated by a comparison between the saving made by a decrease in unit costs, and the carrying charges or costs over representative periods of time.

Budgets should be set up for the main classes of indirect materials for each department concerned.

The foreman of each department should plan his requirements for each day or week and requisition these from the store on a standard form. The standard form should set out in groups all the supplies and materials required by departments.

The Store can deliver in one lot to a sub-store or locker in each department directly controlled by the foreman or through a delegate.

The standard requisition goes to the office to be extended (if necessary, summarised first) and compared with Budget. Important variations from Budget must be explained by the foreman.

Finally, the financial control resolves itself in disclosing the extent of price variations from the expected costs, the value of excess usage and other losses of material, the actual costs of handling material against a budgeted cost and their effect on the profit position month by month.

J.—Executive Action

There is little control unless some official takes action to correct a fault when it is disclosed. An official must be definitely charged with the duty of attending to an adverse trend. It must be somebody's responsibility to do this. Organizing is required.

The procedure for disclosing and reporting discrepancies, excess usage, spoilages, lower turnover, etc., must be rigidly laid down.

A definite salvage plan should be decided upon and an official deputed to see that it is carried out.

It is important that regular reports be made to the executives interested, on obsolete stock, slow-moving lines, salvage stocks and low-grade stock. Departmental heads should definitely be canvassed to ascertain if they can use these stocks or substitute them for better grades or scarce materials.

It is imperative that some definite plan for executive action should be provided to suit the requirements of each firm, so that all vital matters relating to material economies and control are given constant and adequate attention.

K.—Forms and Reports

A summary of the main forms and reports used in controlling and recording stores is as follows:

(1) Records of purchase goods on order, delivery, etc.
(2) Stores Received Report.
(3) Production and Assembly Requests.
(4) Bill of Material or Specification.
(5) Stores Requisition.
(6) Bin Card.
(7) Stores and Stock Ledger Cards.
(8) Balance of stores available Report.
(9) Slow-moving and obsolete stock Report.
(10) Progress of work through factory Report.
(11) Scrap waste and spoilage Reports.
(12) Standard Estimate or Job Card.
(13) Graphic and visual Presentations.

The Stores Ledger—Form 7—is the pivot of the recording. In its simplest form it reports the stock available after issues have been made against orders put into production. This is essential information, but in many cases it has to be speeded up and the Stores Ledger must needs report what is available when all orders in hand, although not necessarily put into production immediately, are covered.

Reliance on "stock in store" rather than "stock available for new orders" may be particularly dangerous when large orders come in irregularly and the stock limit control of purchasing is in operation.

The Stock Report—Form 8—is often prepared to show the stock position in relation to production and purchase requirements. The report may show the quantities and values of stocks on hand, the amount on order, what is required for estimates and the balance available after covering estimates. It may also show the number of weeks' consumption calculated from budgeted or past rate of usage that the stocks on hand and on order will supply.

This report is particularly useful for control purposes, in that it gives a clear picture of the stock situation and provides an over-all check for managerial purposes on purchases and stock balances.

L.—Benefits and Advantages

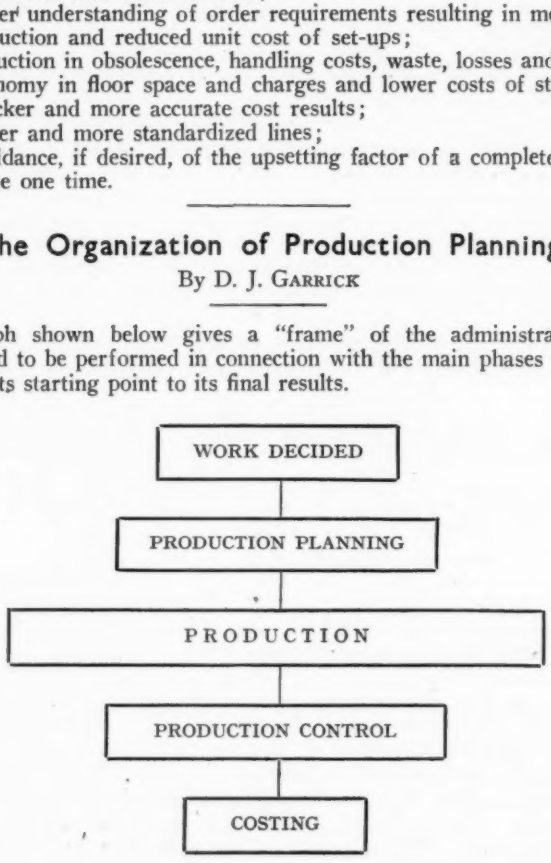
Benefits and advantages arising from stock control can be summarised as follows:

(1) Reduced manufacturing time, lower costs, smaller and more balanced inventories and better service;
(2) Better understanding of order requirements resulting in more regular production and reduced unit cost of set-ups;
(3) Reduction in obsolescence, handling costs, waste, losses and pilfering;
(4) Economy in floor space and charges and lower costs of stocktake;
(5) Quicker and more accurate cost results;
(6) Fewer and more standardized lines;
(7) Avoidance, if desired, of the upsetting factor of a complete stocktake at the one time.

The Organization of Production Planning

By D. J. Garrick

The graph shown below gives a "frame" of the administrative work involved and to be performed in connection with the main phases of production, from its starting point to its final results.



The reception of an order, or the decision by the management on the introduction of a new production line, is regarded in this article as starting point and the collection of all data for costing purposes in connection with the work performed as the final result.

The aim of this article is to give a general and condensed idea of the principles on which the administrative side of Production Planning should be built up to help the production and to make possible the final and accurate costing of the work performed.

This principle of the administrative planning of production, with the clerical work involved, is not, and should not be regarded as, a rigid rule. Many people are inclined to say of the planning generally: "Yes, that's all very nice, but it could not be applied in our case, our work being altogether different." This is not so. Production planning can and should be applied in all cases.

The principle is a guide as to the correct way that production planning should be applied, but the systems through which it can operate are hundredfold.

It might be compared with a man's suit, made to measurement. The principles of a man's suit are that it should have a pair of trousers, a waistcoat and a coat. But the measurement, the cut, the finish of the suit, the colour and quality of the material, the number of pockets on it, etc., are of innumerable variety. As there are very few people who can find a ready-made suit which fits them perfectly, so there is no system in use—except in few cases—which could be applied by any other firm in its entirety without changes to suit specific requirements.

A good production planning system must be made to "measurement" based on the proper principles.

The correct principle of production planning is the right co-ordination of the three "M's" of production, viz., Men, Machines and Material, in regard to quantity, quality and time, so that all possible mental work shall be taken from the departmental superintendents and foremen, to enable them to concentrate on the technical part of their department's performance only.

Before going into the details of production planning, it has to be pointed out that there are two main groups of manufacturing concerns:

1. The manufacturers of standardised articles, producing in huge quantities for years, mostly on process line. This is called mass-production.
2. The contract manufacturers, producing articles in comparatively small quantities for a limited period of time. This is contract-production.

The planning for mass-production, as against contract-production, has the following facilities and advantages:

1. Repetition work.
2. Standardised equipment.
3. Correct arrangement of machines.
4. Division of labour.
5. Complete separation of preparatory work from production.
6. The creation of a highly mechanised and standardised process of production.
7. Elimination of waste.
8. Standard cost. (Time and Motion Study.)

In mass-production there is very little planning, excepting when a new line has to be introduced.

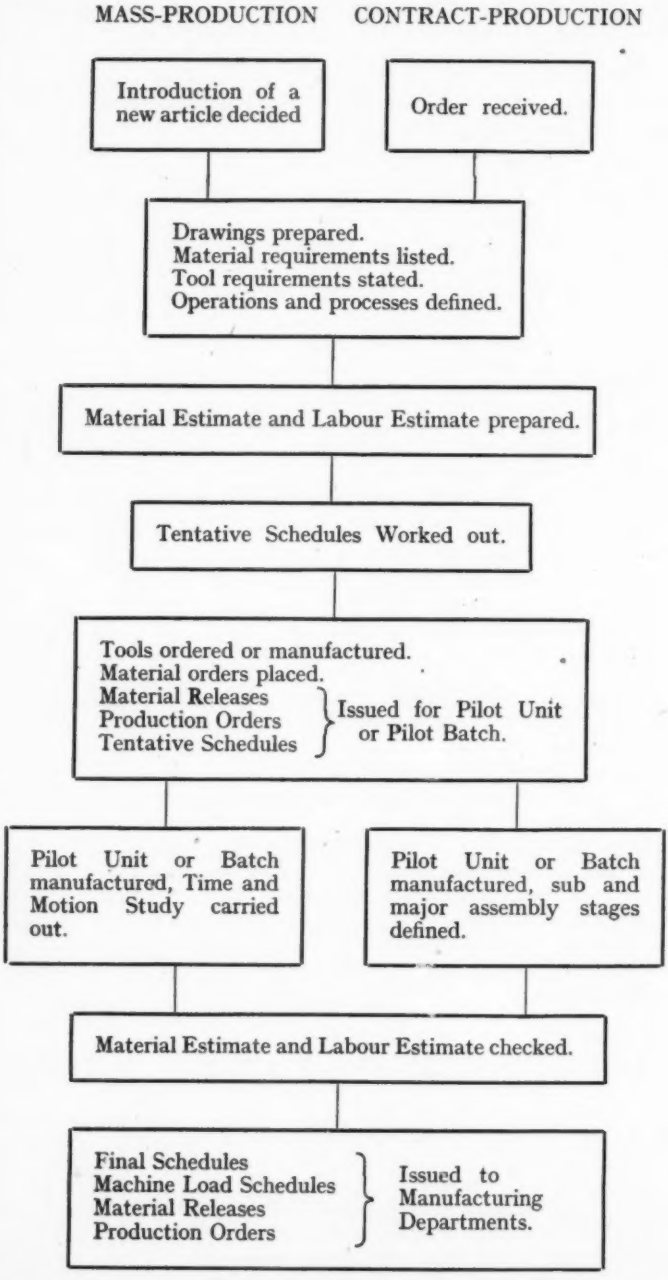
In contract-production, on the other hand, the planning is a continuous and intricate job, employing often up to 2 per cent. of the whole working strength of the concern, especially in engineering works. The necessity for proper planning in contract-production is of paramount importance, since work in contract-production started without planning, causes disorganisation, misunderstandings, waste, spoilages and unnecessary expense; in other words, a state of confusion.

H. N. Casson states in connection with planning that "Work started too soon always means work finished too late."

The planning is the thought, the work is the action. Every man thinks before he acts, or, if not, he acts without thinking and usually gets into trouble. This is a truth, which also stands for any manufacturing concern.

The system of planning will vary according to the processes used and the lay-out of the concern, with its transport possibilities and with the type and class of workmanship available, etc. Briefly, it is influenced by a huge amount of circumstantial factors, which are almost never the same for any two firms. That is why the planning system of one concern will never suit in its entirety any other firm, even of the same kind.

Breaking down the above "Frame-Graph" to its details, required for the building up of a planning system, it will give the following chart:



It shows side by side the differences and the similarity of planning work between the planning system of mass-production and contract-production.

The production planning itself can be subdivided into three main stages:

1. The preparatory stage.
2. The estimating stage.
3. The scheduling stage.

The first step in the preparatory stage is to list all drawings and determine, for each of them, the necessary number of copies required, in order to provide a copy for each department concerned in the work.

All drawings have to be itemised by allocating numbers to each part, which has to be produced or ordered, and a Parts List is then made out from the drawings showing:

Drawing number.
Item or part number.
Item or part name.
Quantity required per unit.
Quantity required for the order.

The Parts List, on which all subsequent documents and instructions are based, is the first and one of the most important documents in connection with the administrative planning of production.

The Material List is now taken from the drawings. This shows for each item or part the section and size of the material required, as well as the buying length and cutting length. This document is often combined with the Parts List, and where the structural organisation of a firm is such as to allow it, it is always preferable. It will mean saving in work and checking. Copies of the Parts List and Material List go to the

Stores,
Material Control Department,
Production Control Department,
Costing Department,
Manufacturing Departments.

The proper listing of the tool requirements is the next move. The Tooling List is similar to the Parts List. It shows:

Drawing number.
Item or part number.
Material description.
Buying and cutting length of the material.
Total quantity required for the order.
Type and description of the tool (dies, jigs, patterns, templates, etc.).
Quantity required.
Material section and size for the tool.
Description of operations to manufacture the tool.

The Tool List is forwarded with the corresponding detailed drawings to all departments concerned.

The Operational Routing List is then taken from the drawings for each item, part and assembly. This list must be very thoroughly prepared, being the key-document to production control and costing. It will set out beside the description of parts and material (as per Parts and Material Lists) the correct sequence of intra- as well as inter-departmental operations. Copy of this document should go to the

Production Control Department,
Costing Department, and one copy to each
Manufacturing Department.

The actual sequence of the preparation and release of the above briefly described documents may vary according to the type of organisation in different concerns, but in any case the releasing of these documents ends the preparatory stage of production planning.

Next stage of the planning, the Estimating Stage, is sub-divided into two main sections:

1. Material Estimate.
2. Labour Estimate.

Estimating on material is the job of the Purchasing Department, or, if no Purchasing Department exists, of the Material Control Department. Very often it is an extension of the Material List, setting out for each item or part the current market price or the best quotation, with an adequate allowance for handling and storing. The departments concerned with the Material Estimate are the

Purchasing Department,
Material Control Department,
Costing Department.

The estimating of labour required for the performance of the work should be, and usually is, done by the Planning Department. It is prepared from the drawings, Material List and Operational Routing List, and shows the actual hours of skilled and unskilled labour, estimated for the performance of each operation in all departments. Copy of the Labour Estimate goes to the

Manufacturing Departments,
Costing Department,

where the financial extension of the estimated labour is carried out.

Material and Labour Estimates include the required material and labour for the manufacturing of the necessary tools and jigs.

The next and perhaps the most important stage of the planning is the Scheduling Stage. The scheduling work is either incorporated in the planning and done by the Planning Department, or there is a separate and independent Schedules Department working in close connection with the Planning Department. In the latter case a copy of all documents of the preparatory stage and of the estimating stage is to be forwarded to the Schedules Department.

Scheduling means, in other words, co-ordination. It is in the scheduling stage where the three "Ms"—Men, Material and Machines—are co-ordinated. The Schedules Department deals mainly with the "time" factor of production, by co-ordinating machine capacity, manpower position and material provision in order to have them in the right quantity, in the right place, and in right time to meet promised or planned delivery dates.

The scheduling stage can be subdivided into two sections:

1. Tentative scheduling.
2. Final scheduling.

In mass-production the Tentative Schedules will be very little different to the Final Schedules, since in this type of work the actual load on the machines, the class and number of men available, as well as the time of each operation on current production are usually known. The only factor to involve probable alterations and to be allowed for is the possibility of difficulties in procuring the required quantity and quality of material, to suit the production schedules. But this is more or less a war-time problem.

In contract-production the position regarding the tentative scheduling is different. Considerable alterations are often necessary to the Tentative Schedules before the Final Schedules can be released. The reason for this is the usual lack of "Time and Motion Study" made hard or impossible by the short time-period of production, and often by the inadequacy of machinery

and equipment, with a consequent and frequent switching over of labour from one job to another. This naturally prevents the operator from developing his skill to the highest degree of efficiency.

These main inconveniences of contract-production can be diminished to a certain extent through a general policy of the management of accepting contracts of the same line or similar lines only. Through such policy the variations between tentative and final scheduling and the alterations on the Tentative against the Final Schedules can be considerably lessened. There is no difference between mass-production and contract-production scheduling as far as material is concerned.

When the Tentative Schedules are ready and released, the first phase of production begins: the pilot or experimental stage. The pilot production may be one unit, the Pilot Model, or a number of pilot units, a Pilot Batch, according to the number of units in the contract to be produced. Production orders and material releases are issued in accordance with the tentative schedules to initiate work on the Pilot Model or Batch.

Meanwhile orders are placed for material, tools, patterns and all outside manufactured parts. As soon as all necessary templates, jigs, tools, etc., are on hand, the production of the Pilot Unit or Pilot Batch starts, and at this stage the difference between mass-production and contract-production will be the most evident.

In mass-production the necessary "Time and Motion Study" is carried out during the course of pilot manufacture, to find the best, cheapest and most efficient way of production for every single operation on parts and on assemblies. The operational times are tabulated against each item, part or assembly, for every operation, and returned to the Planning Department. In most cases this tabulation of operational times is made on the Tentative Schedules released by the Schedules Department to the Manufacturing Departments. Any alteration to the planning in operation or routing, as well as the reason for the change, is noted on the Tentative Schedule to enable the Planning Department to check and decide on the correctness and adaptability of it.

The Tentative Schedule, which may be released in card form, one for each part, item and assembly, or in tabular form on sheets, showing a number of parts, items or assemblies on each sheet, must give the following information:

Drawing number Part or assembly number Part or assembly name Quantity per unit Material specification Operation in the department Tools, jigs, etc., required Allowed time for each operation Transport instructions	These details are filled in by the Planning or Schedules Department before releasing the Tentative Schedules to the Manufacturing Departments.
Actual time as against planned time Description of change (if any) Reason for change	Filled in by the Manufacturing Departments during the course of production of the Pilot Unit or Batch.

In contract-production the predetermination of operations, and especially of assemblies, is often not possible and has to depend on the practical results of the construction of the Pilot Unit or, more often, of the Pilot Batch.

As far as the releasing of the Tentative Schedules is concerned, the procedure will be the same as in the case of mass-production, with the exception of the allowed time for the operations and the possibility of the adaption of "Time and Motion Study." But any concern on contract production serves

its own interests by developing its planning organisation towards the possibility to predetermine its operational times, so creating an approximate basis, to check them against actual times.

The planning for contract-production finishes with the building of the Pilot Model or Batch, when the final operational and assembly results are furnished by the Manufacturing Departments to the Planning Departments.

When the Tentative Schedules are completed and returned to the Planning Department, the checking of the Labour and Material Estimates takes place.

Necessary corrections, if any, are now made to manpower, machine and material requirements and the production planning enters its last stage—the release of the Final Schedules and all the other documents necessary to follow up and control the production and to collect all data and facts, in order to obtain the most detailed and accurate costing of the performed work.

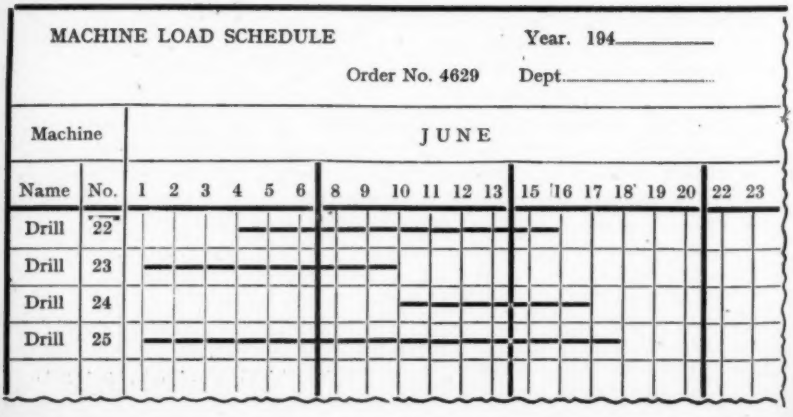
To initiate production, the following documents are to be released:

1. Production Schedules (for parts and assemblies).
2. Machine Load Schedules.
3. Material Releases.
4. Production Orders.

Production Schedules may be kept either in board or in chart form. The board schedule, one in each department, is a large board on which each part or assembly, with its operations, is shown vertically in numerical order, and movable signs, one for each operation, moving horizontally, indicate the progress. The total quantity of the contract to be produced is set out progressively on a horizontal line on the top of the board. Differently coloured signals are used to indicate operations up to schedule-date, behind schedule-date, and ahead of schedule-date.

The chart schedule requires less space than the board schedule and may be kept in folders. The principle of showing the progress of production is the same, such progress being indicated on the schedule by drawing a horizontal line up to the point where a vertical line indicates the progressive quantity finished on each operation. The different colours of the lines for their respective operations show whether the operation is up to schedules, behind or ahead of schedules.

Machine Load Schedule.—These are usually kept in a Gantt chart form showing horizontally on the top of the chart the days of the week and vertically each machine in the department. A line drawn against the machine up to a certain point will indicate the date when the machine will be available for use on other orders.



In highly organised places (mostly on mass-production) the Machine Load Schedule is broken down to a daily chart, showing on the top of the chart the working hours of the day and the line drawn against the machine indicates the period, or periods, as well as the part-number, which is scheduled to be produced on the machine for such periods.

In the Planning or Schedules Department there is a general Machine Load Schedule for each department, showing the total load on each machine for all running orders, including tooling work, and allowing time for maintenance and unforeseen breakdowns.

One of the main tasks of the Planning Department is to define the starting and finishing time on each operation for every part or assembly, in order to have them ready and delivered on the date that they are required in the sub-assemblies or major assemblies. That is the reason why the proper co-ordination of men, material and machines is of such paramount importance since *shortage of material, or manpower, or an overloaded (wrongly scheduled) machine may cause serious hold-up on the final assemblies, upset delivery dates and throw out of gear the whole production programme of the works.*

The period elapsing from the starting of the Pilot Unit or Batch until the starting of the production proper, allows enough time usually for the Purchasing and Material Control Departments to order and receive material in adequate quantities to keep up the production to scheduled dates.

Material Releases are issued by the Material Control Department in order to authorise the store to release material against these documents. The Material Releases should carry the following details:

Order number.
Part or item number.
Part or item name.
Delivered to department, or department concerned.
Material description and specification.
Quantity to be released.
Date when the release has to take place.

The Material Releases are forwarded to the store 24 hours before the material is wanted in the production line, to allow the store the necessary time to have the material ready and prepared when it is called for, or when it has to be transported.

Production Orders are released in order to authorise the manufacturing departments to start work. As a rule, they are forwarded together with, or at the same time as, the Material Releases. The details contained in a properly set out Production Order are the following:

Department concerned.
Order number.
Production Order number.
Part or item or assembly number.
Part or item or assembly name.
Material specification and cutting length.
Quantity to be produced against the Production Order.
Operation (separate Production Order for each operation where practicable).
Machine number and name.
Starting date of operation.
Finishing date of operation.

Material Releases and Production Orders, depending on the production control and costing system of the concern, may be issued for a

Single unit or
Batches of a certain number of units.

The time required to complete one unit is decisive, whether the one way or the other is preferable.

The issue of the Final Schedules, the Material Releases and the Production Orders to the departments concerned ends the administrative part of the production planning and initiates the start of the production and with it the production control.

As stated in a previous article, the production planning has to solve, through its co-ordinating effect, the following four problems of the production:

1. What to do.
2. Where to do.
3. How to do.
4. When to do.

The first three of them are answered in the preparatory stage of the production planning and the fourth in the final scheduling stage.

The proper production planning sets standards or limits for the most efficient and economic way to produce, while production control and costing measure the efficiency and economy of the performed production, by comparing its results with the standards and limits set by the production planning.

Efficiency is the final aim of all production and is a new word for "net profit." Efficiency means the scientific, methodical and economic way of dealing with employees, equipment, materials and the public.

Based on this definition of efficiency, it can be safely stated that no efficiency can be obtained without proper production planning, planning being the first and fundamental step toward efficiency.

What Can Cost Accounting Contribute to Industry?

By H. F. Fox, F.C.A.A., F.R.A.N.Z.

Reports of two interesting addresses appeared in the June issue of *The Australian Accountant*. These were "What Factory Management Expects of Cost Accounting" and "What Cost Accounting Expects of Factory Management." Both speakers submitted some interesting thoughts; but surely they were asked to approach the problem from the wrong angle!

Industry exists for the benefit of neither engineers nor cost accountants. Both, like the lathes and the presses, are merely tools of production. A machine will be discarded when it can no longer be used to assist in securing economic production. Surely engineers and cost accountants, together with time study men, industrial psychologists, and all others connected with industry can hope for no better treatment if and when they become unable to provide an economic contribution to industry. (This comment is in reference to the professions as a whole, and is not a suggestion that employees individually should not be rewarded for long years of faithful service.)

Would it not have been preferable if the speakers had been asked to discuss their subjects from the facet of what can factory management and cost accounting contribute to each other?

Co-operation

Both speakers referred to the necessity for co-operation. A commercial enterprise cannot attain maximum efficiency unless there is full co-operation among all of its component sections. It is vital to bear in mind, though, that "co-operation means working or acting conjointly for the same end." It requires *active* effort from both parties. Little, if any, advantage will accrue to an enterprise if its components are merely passively co-operative.

Industry as a whole has the right to expect much from both engineers and cost accountants. Neither engineers nor cost accountants have the right to sit back in the expectation that the other may make a move. The greatest advantage will ensue if engineers and cost accountants meet each other half way.

Cost accountants must contribute a spirit of active co-operation and helpfulness in their dealings with all the other components of industry.

Simplified Presentation of Data

Mr. Moffatt, who spoke from the viewpoint of cost accountants, advocated "the introduction into the engineering courses of a short course on cost accounting and appreciation of figures." The speaker seems to have overlooked the fact that engineers derive a sound appreciation of figures from their mathematical training. A short course on cost accounting might prove of some small benefit, but it would be difficult to avoid the inclusion of a considerable amount of basic accounting detail, and it is doubtful whether the investment of time and money could be economically justified.

Accountants have shown too great a tendency to present statements which convey to persons without accountancy training as little information as a doctor's prescription conveys to the average accountant—practically nothing! This will have to stop. The cost accountants' plea should not be for the engineers to be taught how to understand the cost reports, but that they, the cost accountants, should be taught to present their information in a manner which will be readily understood by the engineers. After all, engineers are by no means dull and will have little difficulty in understanding statements which are shorn of accounting technicalities and presented in a practical manner. An engineer will show a lively interest if told that the coal consumption in the boiler house has increased twenty-five per cent. without any corresponding increase in output. He may not be so interested if the same information is conveyed to him as an increase from 1·2 pence to 1·5 pence in the cost of coal consumption per unit of output.

By what means can cost accountants learn what information to present and how to present it more intelligibly? There are two answers. Neither is complete in itself—each is complementary to the other.

The cost accountants can ask the engineers to suggest means by which the effectiveness of the cost statements can be increased. The writer's own experience, however, is that the engineers frequently do not know what would be most helpful to them, or have only an idea which is so hazy that they find difficulty in expressing it. It is then that the cost accountants must do more than merely ask questions. They must make suggestions to the engineers, ascertain their reactions, and weigh up the results. They must differentiate between what will be useful and what will be merely interesting. They must change their methods of presentation or the content of the matter presented if consideration shows this to be desirable.

A Practical Approach

Another question now arises. How can cost accountants become qualified to discuss with engineers the means by which cost accounting can make its maximum contribution to industry? The writer knows of no easy road to success—his solution is the converse of the suggestion submitted by Mr. Moffatt. It is that cost accountants should devote greater study to the principles of production and management, and should acquire a good general knowledge of the industries in which they are engaged.

Cost accountants must be prepared to leave the comfort of their office chairs at frequent intervals and move about in the factory or plant. They do not require to know exactly how each machine is operated nor how each intricate

process is carried out (there are probably many production engineers who do not possess such detailed knowledge), but they should have a sound general understanding of what is being done. They should have an appreciation of the difficulties which have to be faced, and a practical knowledge of the channels in which inefficiencies and wastages are most likely to occur.

Cost accountants should have the ability to notice various activities and processes, and relate them to cost information concerning similar, allied, and alternative operations. The occasions of practical contact should provide indications of cost channels which call for more effective control, and, if the cost accountants are tactful in their approach, the personal contacts gained should prove beneficial in securing the willing co-operation of the engineers and other members of the production department.

One is led to the suggestion that benefit would arise by introducing papers on factory management and general engineering methods of production into the cost accounting examinations. Candidates should also be required to visit a specified number of approved industrial plants during their period of study.

A Forward Outlook

Mr. Gibbs, in submitting the viewpoint of factory management, struck an important note when he associated accountants with black crepe and coronial enquiries. What an indictment! Here are some of Mr. Gibbs' own words: "The engineer lives in the future and the cost accountant lives in the past." That statement, it is to be regretted, cannot be contradicted in its application to some who call themselves cost accountants, but they are not cost accountants in the true sense of the term.

The distaste of many accountants for forecasting the future was referred to by the writer in an article, "Some Concepts of Cost Accounting," which appeared in the October, 1943, issue of *The Australian Accountant.*

"Coronial enquiry," said Mr. Gibbs, "is not a branch of accountancy." The writer is of the opinion that this sentence possibly conveys a meaning somewhat different from that which Mr. Gibbs intended. Cost accountants should deal with the past, present, and future. The past (including the immediate past) cannot be altered. Losses or reductions in profit which have resulted from wastages or inefficiencies cannot be recovered, but knowledge of the wastages or inefficiencies can be employed to prevent recurrences, i.e., knowledge of the past can be used to affect the future.

Past information contained in the cost records is also of appreciable value in forecasting future costs, but cost accountants must be careful to consider the many extraneous factors which may cause cost variations in the future. The following list provides examples of these factors, but no attempt has been made to make it exhaustive.

(a) *Possible variations in material costs:*
1. Price fluctuations.
2. Expiry of contracts.
3. Short supply, and necessity to use alternatives.

(b) *Possible variations in labour costs:*
1. Alterations in awards.
2. Variations in the dilution of skilled labour.
3. Use of alternative materials.
4. Installation of new plant.

(c) *Possible variations in expense items:*
1. Fluctuations in prices of general expense stores.
2. Variations in the prices of electricity, gas, and water.
3. Expiry of leases.
4. New plant or buildings.

The so-called "cost accountants" who do not forecast future cost trends and assist their managements in planning accordingly are little short of parasites clinging to the organisations which employ them. It is only forward vision which makes effective cost control a possibility.

Cost Accountants Can Contribute Managers

The profession of cost accounting is ideally suited for contributing the top managers of industry, but the cost accountants must first be prepared to carry the burden of responsibility which industry would be pleased to pass to them.

Most organisations recruit their general managers from one of three sources, viz.:

(a) Technical experts, e.g., engineers, chemists, etc., according to the class of business.
(b) Financial and administrative experts, e.g., accountants (including cost accountants), departmental managers.
(c) Those who have worked their way up from the production floor.

Industry, while there is competition, will always strive to attain maximum efficiency, and for this reason will place itself in the control of the most competent hands. Consequently, when selecting its managers, it weighs the comparative merits of aspirants from these three sources. Individuals vary tremendously in their aptitudes, personalities, and other personal characteristics which are of importance in a manager, but if these qualities rate equally in a number of aspirants it would seem that the progressive cost accountant has the most to offer.

The technical experts, while excellent for planning production, generally lack an adequate knowledge of finance and general administration. They are frequently unable to apply a broad understanding of the whole organisation, and are inclined to concentrate on production, to the detriment of matters of finance and general administration.

The administrative experts can often apply a balanced view to the problems which arise, but they generally lack the breadth of knowledge possessed by other experts.

Those who have risen from the production floor normally exceed the other aspirants in their knowledge of production detail, but this knowledge is restricted to their own limited experience. In any case, top management seldom requires intensive knowledge of production detail. These aspirants also lack the breadth of knowledge which is so desirable in a general manager.

Progressive cost accountants can stand head and shoulders above all the other aspirants. Their accountancy training and experience make them also administrative experts, while in addition they possess a reasonable knowledge of the technology of their businesses. They are therefore the only aspirants whose knowledge embraces technological, financial, and administrative features. This breadth of knowledge enables them to apply a balanced view to the many problems with which a general manager is confronted. They should step naturally and easily into top management.

PRACTICE FOR SALE

Sydney and suburban Accountancy Practice for sale suitable for incorporation with existing business.—"A.R.," C/o. Commonwealth Institute of Accountants, 5 Bligh Street, Sydney.

Book Review

Cost Accountants' Handbook. 1482 pp. £3. Edited by Theodore Lang, M.B.A., C.P.A., Professor of Accounting, New York University. (The Ronald Press Co., New York, 1944.)

Professor Lang in the preface to this useful book explains that "modern cost accounting is a major field in its own right. Its sphere of activity, carved out for itself in this generation, stands midway between those of the general accountant and the engineer. The time, therefore, has come to put into the hands of all those interested in cost accounting a codification of its principles, techniques, in organised, accessible, readily usable, form."

The form of this handbook is somewhat similar to that of Dr. L. P. Alford's monumental work, *Cost and Production Handbook*, in fact Professor Lang also added in the preface: "This seems a fitting place to pay a final tribute to the late Dr. Alford, whose *Cost and Production Handbook* provided a groundwork for this volume, and whose guidance in the planning of the basic outline of the present handbook was terminated by his untimely death. The editor owes much to the qualities of wisdom, experience, and organising genius that were Alford's."

However, where the *Cost and Production Handbook* is interspersed with production problems which were possibly of direct interest to engineers, the *Cost Accountants' Handbook*, whilst not neglecting the technical approach, gives the reader a smooth and continuous flow of information on cost accounting and cognate subjects such as statistics.

The fact that it lures the reader on to study it as he would an interesting schematic presentation, as opposed to merely using it as a reference book, perhaps is its main characteristic.

When one scans the lists of the contributing and consulting editors, including such names as John G. Blocker, Eric H. Camman, James L. Dohr, Cecil Gillespie, Stephen Gilman, Roy B. Kester, Thomas H. Sanders, Victor H. Stempf and Clarence L. van Sickle, it is not surprising to find a very acceptable book—a book destined to take its place among the really great volumes on accounting literature.

R. E. MASKELL.

The Australian Accountant is published on the 15th of each month. Contributions, correspondence, etc., intended for publication should reach the Editor not later than the 22nd day of the month preceding publication.

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